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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,619	09/23/2003	Milan M. Popovich	DGL0029C1US	2188

7590 06/28/2004
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EXAMINER	
BOUTSIKARIS, LEONIDAS	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,619

Applicant(s)

POPOVICH ET AL.

Examiner

Leo Boutsikaris

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[Handwritten signature]

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 69-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 69-89 and 91 is/are allowed.
- 6) ☒ Claim(s) 90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The U.S. patent (6,678,078) issued from the parent application 09/478,150 should be updated in the specification.

Appropriate correction is required.

Claim Objections

Claim 90 is objected to because of the following informalities: Claim 90 cites "first light" in line 14, which lacks antecedent basis. It is suggested that it is replaced by "first bandwidth light". Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 90 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-19, 21 of U.S. Patent No. 6,687,030. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 17-19, 21 refer to an apparatus comprising a condensing lens to direct parallel light to a group of switchable holograms, wherein the switchable holograms sequentially illuminate an image display with first, second and third bandwidth light.

Allowable Subject Matter

Claims 69-89, 91 are allowed.

Claims 69-91 are allowable over the prior art for at least the reason that even though the prior art discloses an optical apparatus comprising a series of switchable holographic elements, each holographic element reflecting or passing through the incident light depending on the state of the element, the prior art fails to teach or reasonably suggest an apparatus comprising a first group of first, second, and third holographic optical elements electrically switchable between active and inactive states, a second group of first, second, and third holographic optical elements electrically switchable between active and inactive states, wherein a display device is configured to be illuminated directly or indirectly with light emerging from one of the first, second, or third holographic optical elements while the display device is displaying the monochrome image frame, as set forth by the claimed combination.

Stone (US 6,072,923) discloses an optical apparatus that is used for optical switching, routing and time delaying optical information signals, and there is no suggestion, nor motivation to use the above system in conjunction with optical display images. Silverstein (US 6,166,800)

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discloses a solid state imaging system (Figs. 4-5), wherein a lens 42 is used to focus light on a series of switchable holographic elements 46, 48, 50, which diffract light onto an image sensor 45. The above system differs from the claimed system in the following ways: Silverstein's system uses a lens to focus light on the switchable elements as opposed to the claimed system wherein a condenser lens is used to collimate light incident on the switchable elements; each of the switchable elements in the former system diffracts light when it is in the OFF state (lines 30-40, col. 6), as opposed to the claimed system wherein each element diffracts light when in the ON state; finally, the former system utilizes an image sensor such as a CCD device, as opposed to the claimed system wherein the holographic elements illuminate an image display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D.
Patent Examiner, AU 2872
June 25, 2004

